REMARKS

Claims 1 to 80 are pending in the application. Claims 10 and 11 have been objected to as being of improper dependent form. Claims 1 to 80 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing particularly to point out and distinctly to claim the subject matter that Applicants regard as the invention. Claims 1 to 4, 6, 9, 13, 38 to 48, 54 to 59, and 78 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Fujiyama et al. (U.S. Patent 5,906,678) in view of Oliver et al. (U.S. Patent 5,593,486), Jaeger et al. (U.S. Patent 4,889,560), and Henseleit et al. (U.S. Patent 5,164,232). Claims 35 to 37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Fujiyama et al. in view of Oliver et al., Jaeger et al., and Henseleit et al. and further in view of Yu et al. (U.S. Patent 6,494,943). Claim 80 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fujiyama et al. in view of Oliver et al., Jaeger et al., Henseleit et al., and Yu et al.

Regarding the objection to claims 10 and 11, the Examiner has stated that these claims, which depend from claim 4, each recite that R_3 is a branched unsubstituted alkyl group having about 34 carbon atoms, while claim 4 recites that R_3 is alkylene, arylene, arylalkylene, or alkylarylene. Applicants have amended claims 10 and 11 to recite that R_3 is a branched unsubstituted alkylene group having about 34 carbon atoms, thereby eliminating this basis for objection. These amendments do not narrow the scope of the claims.

With respect to the rejection of the claims under §112, second paragraph, the Examiner has stated that claims 1, 60 to 68, 70 to 75, 77, 78, and 80 each recite "high shear mixing", and that the scope of

the claims is confusing because it is not clear what is meant by "high" or what values of shear or types of shear mixing are encompassed by this phrase.

Applicants disagree with this position. With a §112, second paragraph rejection, the Examiner has an initial burden of establishing that one having ordinary skill in the art would have had difficulty ascertaining the subject matter applicant regards as his invention. *In re Hammack,* 427 F.2d 1378, 166 U.S.P.Q. 204 (C.C.P.A. 1970). The term in question, when read in light of the specification, must be reasonably precise. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 U.S.P.Q. 81 (Fed. Cir. 1986). (emphasis added) The claims and the phrases in a claim do not stand in a vacuum, but must be read in light of the specification; if, so read, one skilled in the art can determine the scope of the claimed invention, the claim satisfies the requirements of §112, second paragraph. In re Mattison et al., 184 U.S.P.Q. 484 (CCPA 1975). A claim which is understandable and which defines the subject matter which Applicants regard as their invention meets the requirements of the second paragraph of §112. See In re Kamal et al., 398 F.2d 867, 158 U.S.P.Q. 320 (CCPA 1968). In the instant application, Applicants have indicated at, for example, from page 50, line 10 to page 52, line 13 a substantial amount of information regarding the meaning of "high shear" with respect to the instant claims. The working examples further supplement this information. The Examiner is requiring an unreasonable amount of descriptive detail in the claims of the present application. It is the function of the specification and not the claims to describe the invention; so long as one skilled in the art, upon

viewing the specification, can understand what is being claimed, then the definiteness requirement of §112, second paragraph, has been satisfied. See, e.g., Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1 U.S.P.Q. 2d 1081 (Fed. Cir. 1986). Applicants accordingly respectfully request reconsideration and withdrawal of this ground for rejection.

Applicants further point out that the rejection under §112, second paragraph encompasses all 80 of the pending claims. Claims 64 to 77 recite specific aspects of shear which Applicants believe place these claims particularly in condition for allowance with respect to this ground for rejection. More specifically, claims 64, 65, 71, and 72 recite that high shear mixing is performed specifically with a rotor/stator mixer operating with a specifically defined tip speed. Claims 66 to 68 and 73 to 75 recite that high shear mixing is performed specifically with a rotor/stator mixer operating at a specifically defined rpm speed. Claims 69 and 76 recite that high shear mixing is performed specifically at a particularly defined shear rate in terms of s^{-1}. Claims 70 and 77 recite that high shear mixing is performed specifically at a particularly defined shear stress in terms of kilograms per meter. As stated, Applicants believe that these claims are particularly in condition for allowance with respect to this ground for rejection.

The Examiner has rejected claims 1 to 4, 6, 9, 13, 38 to 48, 54 to 59, and 78 under §103 as being unpatentable over Fujiyama et al. in view of Oliver et al., Jaeger et al., and Henseleit et al.

Fujiyama et al. discloses a hot melt colored ink comprising a coloring component being at least one selected from the

group consisting of carbon black, an inorganic pigment, an organic pigment, a dye, and an inorganic extender pigment; phytosterol and/or a derivative thereof in an amount of 0.1 to 90 percent by weight of the hot melt colored ink; and optionally a thermoplastic resin in an amount of 1 to 80 percent by weight of the hot melt colored ink. Various disadvantages found in conventional hot melt colored ink, such as grime, patchy, unsharpness, and stain of transferred print (transferred image) does not occur and a print evenness and a performance (a quality and resolving power of transferred recording image) of transferred print on a transferable recording material (transferable recording paper etc.) are sufficient.

Oliver et al. discloses a hot melt ink composition comprising (a) an ink vehicle, said ink vehicle being a solid at about 25°C and having a viscosity of from about 1 to about 20 centipoise at a temperature suitable for hot melt ink jet printing, said temperature being greater than about 45°C, (b) a photochromic material, (c) an optional colorant, and (d) an optional propellant.

Jaeger et al. discloses a phase change ink carrier composition combined with a compatible colorant to form a phase change ink composition. A thin film of substantially uniform thickness of that phase change ink carrier composition, and the ink produced therefrom, has a high degree of lightness and chroma. The thin films of a substantially uniform thickness of the ink composition are also rectilinearly light transmissive. The carrier composition is preferably a fatty amide-containing compound.

Henseleit et al. discloses an ink composition which comprises an aqueous liquid vehicle, a colorant, and a phosphate ester. The ink is particularly suitable for ink jet printing processes, especially thermal ink jet printing processes. The inks exhibit low viscosities and rapid drying times, particularly on plain paper. Also disclosed is a process for generating images onto a substrate which comprises incorporating an ink composition which comprises an aqueous liquid vehicle, a colorant, and a phosphate ester into an ink jet printing apparatus and causing droplets of the ink composition to be ejected in an imagewise pattern onto the substrate.

The Examiner has stated that Fujiyama et al. discloses a process for preparing hot melt ink comprising ink carrier and 3 to 20 percent of at least one or more coloring agents that include pigment and dye such as phthalocyanine wherein the method comprises admixing carbon black and polyethylene, extruding the mixture, adding a nonpolar component such as wax, and then subjecting the resulting mixture to mixing using a three roll mill. The Examiner has further stated that it is well known, as disclosed by Henseleit et al. at column 8, lines 53 to 54, that a three roll mill is a high shear mixer, that the wax includes polyethylene wax, and that it is noted from example 2 that the ratio of polyethylene to carbon black is, for instance, 0.8 (40/50).

The Examiner has stated that the difference between Fujiyama et al. and the presently claimed invention is (a) the requirement in the claims of a polar component that is a dispersant, and (b) the requirement in the claims of the extruder temperature.

Regarding requirement (a), the Examiner has stated that Oliver et al., which is drawn to hot melt ink, discloses the use of a mixture of monoamide and tetra-amide dimer acid as an ink vehicle to produce an image that is able to withstand severe storage conditions without melting or exhibiting offset and that has high optical transmission, hue, and chroma, that this reference also discloses the equivalence and interchangeability of using a mixture of monoamide and tetra-amide dimer acid with using polyethylene at column 8, lines 16 to 26, column 8, line 67 to column 9, line 4, column 9, lines 34 to 46, and column 10, lines 38 to 47, that it is well known, as disclosed in Jaeger et al. column 2, lines 65 to 68 that dimer acid-based tetra-amide is obtained from dimer acid, ethylene diamine, and fatty acid, and that in light of the above, it would have been obvious to one of ordinary skill in the art to use a mixture of monoamide and tetra-amide with the carbon black of Fujiyama et al. to produce an ink jet image that is able to withstand severe storage conditions without melting or exhibiting offset and that has high optical transmission, hue, and chroma, thereby arriving at the instantly claimed invention.

Regarding requirement (b), the Examiner has stated that although there is no explicit disclosure in Fujiyama et al. or Oliver et al. that the extrusion occurs at a temperature that is at or above about the peak crystallization temperature of the dispersant and below about the melting temperature of the dispersant, given that Fujiyama et al. in combination with Oliver et al. discloses extruding a combination of pigment and tetra-amide as presently claimed, it is clear that the extrusion must intrinsically occur at temperature, including that presently

claimed, such that the tetra-amide is suitable for extruding, and thus one of ordinary skill in the art would have arrived at the claimed invention. In addition, the Examiner is of the position that it would have been within the skill level of, as well as obvious to, one of ordinary skill in the art to control the temperature of the extruder to temperatures, including that presently claimed, in order that the tetra-amide and pigment are able to be extruded effectively, and thus one of ordinary skill in the art would have arrived at the claimed invention.

Applicants disagree with this position. Applicants initially point out that Fujiyama et al. is directed to a hot melt colored ink intended for use in applications (commonly referred to as thermal transfer printing) wherein the ink is coated onto a substrate, such as paper or heat-resistant plastic film, and a thermal print head heats the coated substrate from the opposite side to heat and soften the ink so that it can subsequently be transferred to the surface of a receiving material such as paper (column 1, lines 12 to 19). Accordingly, one of ordinary skill in the art would not review this reference with the expectation that it would address problems relevant to the phase change ink jet art, such as agglomeration or settling of ink pigments when the ink is exposed to excessive heating conditions over extended time periods, clogging of jets in the printhead and printhead failure that might be caused by agglomeration of the pigment colorant in the ink, and the like; these problems are addressed by the instant invention. In addition, this reference is directed to an invention wherein dispersability of a coloring component such as carbon black and a pigment in a hot melt colored ink is improved by adding phytosterol and/or a derivative

thereof to the ink. Accordingly, Applicants are of the position that one of ordinary skill in the phase change ink jet ink art would not have been motivated to consider this reference when addressing the problems solved by the present invention.

In addition, the Examiner has stated that Oliver et al. discloses the equivalence and interchangeability of using a mixture of monoamide and tetra-amide dimer acid with using polyethylene at column 8, lines 16 to 26, column 8, line 67 to column 9, line 4, column 9, lines 34 to 36, and column 10, lines 38 to 47. Applicants disagree with this position. Oliver et al. teaches that examples of suitable ink vehicles include (A) ethylene/propylene copolymers, (B) urethane derivatives of oxidized synthetic or petroleum waxes, (C) n-paraffinic, branched paraffinic, and naphthenic hydrocarbons, typically with from about 30 to about 60 carbon atoms, generally prepared by the refinement of naturally occurring hydrocarbons, (D) highly branched hydrocarbons, typically prepared by olefin polymerization, (E) ethoxylated alcohols, (F) high molecular weight linear alcohols, (G) hydrocarbon-based waxes, (H) modified maleic anhydride hydrocarbon adducts of polyolefins prepared by graft copolymerization, (I) mixtures of monoamides and tetraamides, and any other suitable material, as well as mixtures thereof. This portion of the reference does not constitute a teaching that these materials are equivalent and/or interchangeable. In fact, while these materials are all useful and suitable phase change ink carrier components, they have quite different characteristics, as is known to those of ordinary skill in the art. Accordingly, Applicants are of the position that these references, viewed in combination, would not lead

one of ordinary skill in the art to arrive at the instantly claimed invention and that the Examiner has failed to establish a primary case of obviousness with respect to the instantly claimed invention as recited in claims 1 to 4, 6, 9, 13, 38 to 48, 54 to 59, and 78.

Further, the Examiner has stated that given that Fujiyama et al. in combination with Oliver et al. discloses extruding a combination of pigment and tetra-amide as presently claimed, it is clear that the extrusion must intrinsically occur at temperature, including that presently claimed, such that the tetra-amide is suitable for extruding, and thus one of ordinary skill in the art would have arrived at the claimed invention. In addition, the Examiner is of the position that it would have been within the skill level of, as well as obvious to, one of ordinary skill in the art to control the temperature of the extruder to temperatures, including that presently claimed, in order that the tetra-amide and pigment are able to be extruded effectively, and thus one of ordinary skill in the art would have arrived at the claimed invention.

Applicants disagree with this position. As illustrated in the working examples, the extruder temperature, the peak crystallization temperature of the polar dispersant, and the peak melting temperature of the polar dispersant are integrally related. When the pigment dispersion is extruded at or above the peak melting temperature of the polar dispersion, the dispersant melts to form a liquid that is effective in wetting the pigment particles but not effective to break down pigment particle agglomerates because of low shearing forces generated in the extruder. The resulting inks have poor pigment particle size distribution and large pigment agglomerates, and are difficult to filter. When the

extruder temperature is below the peak crystallization temperature of the polar dispersant, most of the polar dispersant crystallizes out of the dispersion, causing poor wetting of the pigment particles in the extruder. The resulting inks are difficult to filter. When the extruder temperature is at a temperature that is at or above the peak crystallization temperature of the polar dispersant and below the peak melting temperature of the polar dispersant, however, while most of the polar dispersant crystallizes out of the dispersion, high shear forces generated in the extruder are able to soften the polar dispersant sufficiently to enable wetting of the pigment particles and good dispersion of the pigment within the dispersion. The resulting inks give improved filtration results. The actual numbers in the working examples are significant: the percentages of ink filtered at temperatures at or above the peak melting temperature of the polar dispersion (at two different extruder speeds) were 13.1 and 0; the percentages of ink filtered at temperatures below the peak crystallization temperature of the polar dispersant (at two different extruder speeds) were 11.5 and 0; the percentages of ink filtered at temperatures at or above the peak crystallization temperature of the polar dispersant and below the peak melting temperature of the polar dispersant (at two different extruder speeds) were 62.6 and 40.6. These results indicate an unexpected and nonobvious advantage to selecting the extrusion temperature with respect to the peak crystallization temperature of the polar dispersant and the peak melting temperature of the polar dispersant. One of ordinary skill in the art would not be led to this conclusion by the teachings of the cited references viewed in combination. Accordingly, Applicants are of the position that the

Examiner has failed to establish a prima facie case of obviousness with respect to the instant invention as recited in claims 1 to 4, 6, 9, 13, 38 to 48, 54 to 59, and 78.

The Examiner has also rejected claims 35 to 37 under §103 as being unpatentable over Fujiyama et al. in view of Oliver et al., Jaeger et al., and Henseleit et al. and further in view of Yu et al.

Yu et al. discloses colored pigments having one or more desired parameters and/or properties. These parameters and/or properties include: a) a particles size of from about 10 nm to about 300 nm; b) an accusizer number of less than 10^{10} particles/ml of dispersion at 15 percent solids which are greater than 0.5 micron; c) a filterability such that when in a liquid medium, 100 ml having 10 percent solids of the colored pigment filters through a 3 micron nylon absolute filter; d) a colored pigment purity of greater than about 80 percent, based on extractable material; and/or e) a stability such that the above-described properties do not change by more than 50 percent at 25°C for at least one week. Colored pigments having at least one organic group and having one or more of the above-described characteristics is also described as well as a process for preparing surface-modified colored pigments. The process involves combining at least one treating agent and at least one type of colored pigment(s) in a container to form a mixture and subjecting the mixture to high shearing and introducing at least one diazotizing agent to the mixture at least for a portion of time while the high shearing is taking place, and preferably during the entire time that high shearing is taking place, such that a reaction product is formed and contains surface-modified colored pigment(s).

The Examiner has stated that the difference between Fujiyama et al. in view of Oliver et al., Jaeger et al., and Henseleit et al. and the present claimed invention is the requirement in the claims of pigment having acidic or basic groups on the surface, that Yu et al. discloses the use of surface treated pigment having acidic or basic groups on the surface and further discloses that such pigments are suitable for use in hot melt ink to improve storage stability and provide good waterfastness and color intensity, and that it would have been obvious to one of ordinary skill in the art to use this pigment in the ink of Fujiyama et al. to produce ink with improved storage stability as well as good waterfastness and color intensity, thereby arriving at the instantly claimed invention.

Applicants initially point out that claim 35 recites "(a) process according to claim 16 wherein the polyalkylene succinimide is present in the ink in an amount of no more than about 10 percent by weight of the ink." Applicants believe that this rejection should apply only to claims 36 and 37, which recite pigment particles have acidic functional groups and basic functional groups, respectively, on the surfaces thereof.

Applicants are of the position that claims 36 and 37 are patentable for the reasons set forth hereinabove with respect to the rejection of claims 1 to 4, 6, 9, 13, 38 to 48, 54 to 59, and 78 under §103 as being unpatentable over Fujiyama et al. in view of Oliver et al., Jaeger et al., and Henseleit et al.

The Examiner has also rejected claim 80 under §103 as being unpatentable over Fujiyama et al. in view of Oliver et al., Jaeger et

al., Henseleit et al., and Yu et al. The Examiner has stated that Fujiyama et al. discloses a process for preparing hot melt ink comprising ink carrier and 3 to 20 percent of at least one or more coloring agents that include pigment and dye such as phthalocyanine wherein the method comprises admixing carbon black and polyethylene, extruding the mixture, adding a nonpolar component such as wax, and then subjecting the resulting mixture to mixing using a three roll mill. The Examiner has further stated that it is well known, as disclosed by Henseleit et al. at column 8, lines 53 to 54, that a three roll mill is a high shear mixer.

The Examiner has stated that the difference between Fujiyama et al. and the presently claimed invention is (a) the requirement in the claims of a polar component that is a dispersant, (b) the requirement in the claims of the pigment having acidic or basic groups on the surface, and (c) the requirement in the claims of the extruder temperature.

Regarding requirement (a), the Examiner has stated that Oliver et al., which is drawn to hot melt ink, discloses the use of a mixture of monoamide and tetra-amide dimer acid as an ink vehicle to produce an image that is able to withstand severe storage conditions without melting or exhibiting offset and that has high optical transmission, hue, and chroma, that this reference also discloses the equivalence and interchangeability of using a mixture of monoamide and tetra-amide dimer acid with using polyethylene at column 8, lines 16 to 26, column 8, line 67 to column 9, line 4, column 9, lines 34 to 46, and column 10, lines 38 to 47), that it is well known, as disclosed in Jaeger et al. column 2, lines 65 to 68 that dimer acid-based tetra-amide is obtained from dimer acid,

ethylene diamine, and fatty acid, and that in light of the above, it would have been obvious to one of ordinary skill in the art to use a mixture of monoamide and tetra-amide with the carbon black of Fujiyama et al. to produce an ink jet image that is able to withstand severe storage conditions without melting or exhibiting offset and that has high optical transmission, hue, and chroma, thereby arriving at the instantly claimed invention.

Regarding requirement (b), the Examiner has stated that although there is no explicit disclosure in Fujiyama et al., Oliver et al., or Yu et al. that the extrusion occurs at a temperature that is at or above about the peak crystallization temperature of the dispersant and below about the melting temperature of the dispersant, given that Fujiyama et al. in combination with Oliver et al. discloses extruding a combination of pigment and tetra-amide as presently claimed, it is clear that the extrusion must intrinsically occur at temperature, including that presently claimed, such that the tetra-amide is suitable for extruding, and thus one of ordinary skill in the art would have arrived at the claimed invention. In addition, the Examiner is of the position that it would have been within the skill level of, as well as obvious to, one of ordinary skill in the art to control the temperature of the extruder to temperatures, including that presently claimed, in order that the tetra-amide and pigment are able to be extruded effectively, and thus one of ordinary skill in the art would have arrived at the claimed invention.

Regarding requirement (c), the Examiner has stated that Yu et al. discloses the use of surface treated pigment having acidic or basic groups on the surface and further discloses that such pigments are

suitable for use in hot melt ink to improve storage stability and provide good waterfastness and color intensity, and that it would have been obvious to one of ordinary skill in the art to use this pigment in the ink of Fujiyama et al. to produce ink with improved storage stability as well as good waterfastness and color intensity, thereby arriving at the instantly claimed invention.

Applicants disagree with this position. Applicants initially point out that Fujiyama et al. is directed to a hot melt colored ink intended for use in applications (commonly referred to as thermal transfer printing) wherein the ink is coated onto a substrate, such as paper or heat-resistant plastic film, and a thermal print head heats the coated substrate from the opposite side to heat and soften the ink so that it can subsequently be transferred to the surface of a receiving material such as paper (column 1, lines 12 to 19). Accordingly, one of ordinary skill in the art would not review this reference with the expectation that it would address problems relevant to the phase change ink jet art, such as agglomeration or settling of ink pigments when the ink is exposed to excessive heating conditions over extended time periods, clogging of jets in the printhead and printhead failure that might be caused by agglomeration of the pigment colorant in the ink, and the like; these problems are addressed by the instant invention. In addition, this reference is directed to an invention wherein dispersability of a coloring component such as carbon black and a pigment in a hot melt colored ink is improved by adding phytosterol and/or a derivative thereof to the ink. Accordingly, Applicants are of the position that one of ordinary skill in the phase change ink jet ink art would not have been

motivated to consider this reference when addressing the problems solved by the present invention.

In addition, the Examiner has stated that Oliver et al. discloses the equivalence and interchangeability of using a mixture of monoamide and tetra-amide dimer acid with using polyethylene at column 8, lines 16 to 26, column 8, line 67 to column 9, line 4, column 9, lines 34 to 36, and column 10, lines 38 to 47. Applicants disagree with this position. Oliver et al. teaches that examples of suitable ink vehicles include (A) ethylene/propylene copolymers, (B) urethane derivatives of oxidized synthetic or petroleum waxes, (C) n-paraffinic, branched paraffinic, and naphthenic hydrocarbons, typically with from about 30 to about 60 carbon atoms, generally prepared by the refinement of naturally occurring hydrocarbons, (D) highly branched hydrocarbons, typically prepared by olefin polymerization, (E) ethoxylated alcohols, (F) high molecular weight linear alcohols, (G) hydrocarbon-based waxes, (H) modified maleic anhydride hydrocarbon adducts of polyolefins prepared by graft copolymerization, (I) mixtures of monoamides and tetraamides, and any other suitable material, as well as mixtures thereof. This portion of the reference does not constitute a teaching that these materials are equivalent and/or interchangeable. In fact, while these materials are all useful and suitable phase change ink carrier components, they have quite different characteristics, as is known to those of ordinary skill in the art. Accordingly, Applicants are of the position that these references, viewed in combination, would not lead one of ordinary skill in the art to arrive at the instantly claimed invention and that the Examiner has failed to establish a primary case of

obviousness with respect to the instantly claimed invention as recited in claim 80.

Further, the Examiner has stated that given that Fujiyama et al. in combination with Oliver et al. discloses extruding a combination of pigment and tetra-amide as presently claimed, it is clear that the extrusion must intrinsically occur at temperature, including that presently claimed, such that the tetra-amide is suitable for extruding, and thus one of ordinary skill in the art would have arrived at the claimed invention. In addition, the Examiner is of the position that it would have been within the skill level of, as well as obvious to, one of ordinary skill in the art to control the temperature of the extruder to temperatures, including that presently claimed, in order that the tetra-amide and pigment are able to be extruded effectively, and thus one of ordinary skill in the art would have arrived at the claimed invention.

Applicants disagree with this position. As illustrated in the working examples, the extruder temperature, the peak crystallization temperature of the polar dispersant, and the peak melting temperature of the polar dispersant are integrally related. When the pigment dispersion is extruded at or above the peak melting temperature of the polar dispersion, the dispersant melts to form a liquid that is effective in wetting the pigment particles but not effective to break down pigment particle agglomerates because of low shearing forces generated in the extruder. The resulting inks have poor pigment particle size distribution and large pigment agglomerates, and are difficult to filter. When the extruder temperature is below the peak crystallization temperature of the polar dispersant, most of the polar dispersant crystallizes out of the

dispersion, causing poor wetting of the pigment particles in the extruder. The resulting inks are difficult to filter. When the extruder temperature is at a temperature that is at or above the peak crystallization temperature of the polar dispersant and below the peak melting temperature of the polar dispersant, however, while most of the polar dispersant crystallizes out of the dispersion, high shear forces generated in the extruder are able to soften the polar dispersant sufficiently to enable wetting of the pigment particles and good dispersion of the pigment within the dispersion. The resulting inks give improved filtration results. The actual numbers in the working examples are significant: the percentages of ink filtered at temperatures at or above the peak melting temperature of the polar dispersion (at two different extruder speeds) were 13.1 and 0; the percentages of ink filtered at temperatures below the peak crystallization temperature of the polar dispersant (at two different extruder speeds) were 11.5 and 0; the percentages of ink filtered at temperatures at or above the peak crystallization temperature of the polar dispersant and below the peak melting temperature of the polar dispersant (at two different extruder speeds) were 62.6 and 40.6. Further high shear mixing of the pigment dispersion prior to addition of the pigment dispersion prior to the addition of the additional ink ingredients, as illustrated in Examples VII and VIII, the percentages of ink filtered at temperatures at or above the peak crystallization temperature of the polar dispersant and below the peak melting temperature of the polar dispersant (for two different periods of time) were 80 and 100. These results indicate an unexpected and nonobvious advantage to selecting the extrusion temperature with respect to the peak crystallization

temperature of the polar dispersant and the peak melting temperature of the polar dispersant. One of ordinary skill in the art would not be led to this conclusion by the teachings of the cited references viewed in combination. Accordingly, Applicants are of the position that the Examiner has failed to establish a prima facie case of obviousness with respect to the instant invention as recited in claim 80.

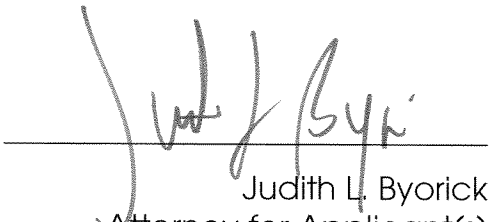
Applicants point out that claims 5, 7, 8, 10 to 12, 14 to 34, 49 to 53, 60 to 77, and 79 have been rejected only under §112, second paragraph, and not under §103. Applicants assume that the Examiner has found these claims to be allowable with respect to the prior art of record. For the reasons stated hereinabove, Applicants also believe that claim 35 should be included in this group of claims.

Applicants believe that the foregoing amendments and distinctions place the claims in condition for allowance, and accordingly respectfully request reconsideration and withdrawal of all grounds for rejection.

No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney (or agent) hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

In the event the Examiner considers personal contact advantageous to the disposition of this case, she is hereby authorized to call Applicant(s) attorney, Judith L. Byorick, at Telephone Number (585) 423-4564, Rochester, New York.

Respectfully submitted,



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